

Appl. No. 10/589,418  
Amendment Dated July 23, 2009  
Reply to Office Action of February 18, 2009

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Amendments to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A process for producing 2,2,3,3-tetrafluorooxethane, which comprises allowing tetrafluoroethylene to react with paraformaldehyde in anhydrous hydrogen fluoride, said reaction being carried out in the presence of polyfluoroalkylic polyfluoroalkylcarboxylic acid or polyfluoroalkyl ester thereof, represented by the following general formula:



wherein Rf is a polyfluoroalkyl group having 1-5 carbon atoms, and Rf' is a hydrogen atom or a polyfluoroalkyl group having 1-5 carbon atoms.

Claim 2 (Original): A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, wherein the carboxylic acid, represented by the general formula RfCOORf', is CF<sub>3</sub>COOH.

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**Claim 3 (Original):** A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, where the carboxylic acid ester, represented by the general formula RfCOORf', is CF<sub>3</sub>COOCH<sub>2</sub>CF<sub>2</sub>CF<sub>3</sub>.

**Claim 4 (Original):** A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, where the carboxylic acid ester, represented by the general formula RfCOORf', is CF<sub>3</sub>COOCH<sub>2</sub>CF<sub>3</sub>.

**Claim 5 (Previously presented):** A process for producing 2,2,3,3-tetrafluorooxethane, which comprises allowing tetrafluoroethylene to react with trioxane in anhydrous hydrogen fluoride, said reaction being carried out in the presence of polyfluoroalkylic acid or polyfluoroalkyl ester thereof, represented by the following general formula:



wherein Rf is a polyfluoroalkyl group having 1-5 carbon atoms, and Rf' is a hydrogen atom or a polyfluoroalkyl group having 1-5 carbon atoms.

**Claim 6 (Previously presented):** A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, wherein the carboxylic acid, represented by the general formula RfCOORf', is CF<sub>3</sub>COOH.

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Claim 7 (Previously presented): A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, where the carboxylic acid ester, represented by the general formula RfCOORf', is CF<sub>3</sub>COOCH<sub>2</sub>CF<sub>2</sub>CF<sub>3</sub>.

Claim 8 (Previously presented): A process for producing 2,2,3,3-tetrafluorooxethane according to Claim 1, where the carboxylic acid ester, represented by the general formula RfCOORf', is CF<sub>3</sub>COOCH<sub>2</sub>CF<sub>3</sub>.